

OPTN Kidney Paired Donation (KPD) Histocompatibility Testing Requirements Checklist

When entering donor and candidate HLA

- Required HLA for candidate: A, B, Bw4, C, DR, DR51, DR52, DR53, DQB1, DQA1, DPB1. Must list both antigens or indicate 'no second antigen detected.' (If unacceptable antigens are entered for C, DR51, DR52, DR53, DQB1, then the corresponding HLA information is also required in order for the candidate to be eligible for KPD match runs.)
- Required HLA for donors: HLA-A, B, Bw4, Bw6, C, DR, DR51, DR52, DR53, DQB1, DQA1, and DPB1. Must list both antigens or indicate 'no second antigen detected'.
- HLA typing for candidates **and** donors must be performed using molecular methods and reported at the level of serological splits.

When entering a candidate's unacceptable antigens

- Unacceptable antigens detected must be identified using a solid-phase, single phenotype or solid-phase single-antigen test. The method used to test candidates for antibodies must be at least as sensitive as the crossmatch method.
- Two individuals must review and verify candidate's unacceptable antigens when entered in KPD.
- At least one individual must be the HLA laboratory director (or designee).
- The candidate and their donor will not be eligible to participate in match runs until this review has been reported by checking YES to the review question on the candidate HLA page.
- If no HLA antibodies or unacceptable antigens are detected, then report the candidate as unsensitized.
- Under 'UNACCEPTABLE ANTIGENS,' enter antigens that are absolute contraindications to transplant. Candidates will not be matched with donors who have HLA equivalent to these unacceptables.
- Unacceptable antigens entered under 'ALL OTHER ANTIBODY SPECIFICITIES' will match with donors who have HLA equivalent to these unacceptables.

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Pre-screen donors weekly

- Complete donor pre-screen on all candidates with a CPRA of $\geq 90\%$ (*required*)
- Complete donor pre-screen on all candidates with a CPRA of $< 90\%$ (*recommended*)

When to retest candidate unacceptable antigens

- Candidates must be retested for unacceptable antigens at the following times:
 - Every 110 days from the date of the most recent test
 - When a potentially sensitizing event occurs
 - When a candidate is reactivated after being inactive more than 90 days
 - If there is an unacceptable positive physical crossmatch to a matched donor
- Any new unacceptable antigens must be reported on the candidate HLA and Unacceptable page.

When reviewing a KPD match offer

- The candidate's transplant hospital must perform a physical crossmatch between the candidate and their matched donor before the matched donor's recovery is scheduled.
- The candidate's transplant hospital must perform a final crossmatch prior to transplant, per hospital policy/protocol.
- The candidate's transplant hospital must report all crossmatch results to the OPTN Contractor and the matched donor's transplant hospital. This can be done via the match response page.
- Before declining a match offer for unacceptable antigens (virtual or physical), a candidate's physician or surgeon (or designee) must review the matched donor's antigens and matched candidate's unacceptable antigens with the histocompatibility laboratory director (or designee) and document the joint review in the candidate's medical record.
- The matched candidate's transplant hospital is responsible for performing HLA typing on the matched donor and verifying the HLA information reported prior to transplant.

When declining a match offer due to unacceptable antigens (virtual or physical)

- When a match offer is declined for unacceptable antigens (virtual or physical), the transplant hospital must submit an explanation of the reason for declining to the OPTN Contractor within 7 days after declining the offer. KPD Primary and Alternate Contacts receive an email reminder to do this.
- The candidate's physician or surgeon or their designee and the histocompatibility laboratory director or their designee must review the unacceptable antigens reported for the candidate and report this review to the OPTN contractor. The candidate and their donor will not be eligible to participate in match runs until the Reviewed box on the candidate HLA page has been checked.